

## ANNOTATED CHECKLIST OF THE RHYACOPHILOIDEA AND INTEGRIPALPIA (TRICHOPTERA) OF ALABAMA<sup>1</sup>

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**ABSTRACT:** Distributional records of 132 species of caddisflies in the suborder Annulipalpia, (superfamily Rhyacophiloidea) and the suborder Integrupalpia (superfamilies Limnephiloidea, Phryganeioidea, Leptoceroidea, and Sericostomatidea) from Alabama are listed, along with information on seasonal occurrence, habitat and relative abundance. This checklist brings the total number of caddisflies known from Alabama to 323 species.

The caddisfly fauna of the southeastern United States has received considerable attention in recent years and species checklists are now available for Tennessee (Etnier and Schuster, 1979), North and South Carolina (Unzicker *et al.*, 1982), Kentucky (Resh, 1975), Virginia (Parker and Voshell, 1981), and Mississippi including southeastern Louisiana (Holzenthal *et al.*, 1982). This is the third and final contribution in a series of papers (Harris, 1986a; Lago and Harris, 1987) on the caddisfly fauna of Alabama. This checklist presents distributional records for 132 species in the families Glossosomatidae and Rhyacophilidae (infraorder Spicipalpia, Weaver, 1984); Goeridae, Limnephilidae, Uenoidae, Brachycentridae, Lepidostomatidae, Phryganeidae (infraorder Plenitentoria, Weaver, 1984); and Odontoceridae, Calamoceratidae, Leptoceridae, Molannidae, Helicopsychoidea, and Sericostomatidae (infraorder Brevitentoria, Weaver, 1984). The Hydroptilidae which are also in the infraorder Spicipalpia (Weaver, 1984) are not included in this checklist, but were compiled in Harris (1986a). Of the 132 species identified from Alabama, ten were described during the course of the study (Harris, 1986b, 1987, 1989; Vineyard and Wiggins, 1987) and two others will be described in the near future. The species richness is indicative of the range of physiographic regions represented in the state. These include the East Gulf Coastal Plain, Piedmont Plateau, Valley and Ridge, and Appalachian Plateau, including the Highland Rim Plateau and Cumberland Plateau subregions (Sapp and Emplaincourt, 1975).

### CHECKLIST OF SPECIES

In the following checklist each species is followed by numerically

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coded county records. These counties and their location, both within the state and within a physiographic province, are depicted in Figure 1. General information on distribution and abundance in the state is included with each species, followed by collection months and numbers of specimens examined ( ). In most cases only adult males were examined, except as noted. Detailed locality and collection information will be provided in an overall summary of the caddisfly fauna of the state, to be published later. This checklist represents over 600 collections made primarily with black-light traps between 1981 and 1987. Voucher specimens are maintained in the insect collections of the Geological Survey of Alabama and the University of Alabama.

## SPICIPALPIA

### HYDROPTILOIDEA

#### Glossosomatidae

- Agapetus alabamensis* Harris. 25. Known only from two small streams of the Cumberland Plateau. April, May. (30)
- A. avitus* Edwards. 1, 2, 4, 10. Locally common in northern Alabama, particularly the Highland Rim. April-June. (94)
- A. crasmus* Ross. 3, 4. Locally common in lower Appalachians of northeastern Alabama. June. (51)
- A. gelbae* Ross. 1. Uncommon in small Highland Rim streams. April-June. (20)
- A. hessi* Leonard and Leonard. 3, 8, 12, 34. Locally common; primarily in small streams of northern Alabama. May, June. (115)
- A. iridis* Ross. 17. Record from small stream in lower Appalachians provided by D.A. Etnier. April. (4)
- A. pinatus* Ross. 17. Only records from a small stream in the lower Appalachians. May. (2)
- A. rossi* Denning. 8, 12, 17, 26, 31, 34. Frequently collected at scattered localities in northern half of state. April-June. (319)
- A. spinosus* Etnier and Way. 5. Rarely collected; in small streams of the lower Appalachians. May. (4)
- A. tomus* Ross. 14, 17, 20, 34. Uncommon; in small streams of northcentral Alabama. May. (12)
- Glossosoma nigrior* Banks. 1, 2, 5, 6, 8-10, 13, 14, 17-20, 25, 27, 29, 31, 32, 51. Widespread and common; primarily in small streams of northern Alabama. April-September. (405)
- Matrioptila jeanae* (Ross). 5, 17, 26, 29, 31, 32, 34. Most frequent in small Piedmont streams, never collected in large numbers. May, June. (135)
- Protoptila cahabensis* Harris. 19. Known only from a small section of the Cahaba River. May, August, October. (70)
- P. georgiana* Denning. 31. Only records from Hillabee Creek, a large Piedmont stream. May. (8)
- P. maculata* (Hagen). 16-18. Locally abundant in small streams of lower Appalachians and upper Piedmont. May, June, September, October. (134)
- P. palina* Ross. 3, 12-14, 17-20, 25, 26, 29, 31, 32, 34, 54, 63-65. Widespread and common in Alabama, but most frequently collected in northern half of state. April-October. (2491)

## RHYACOPHILOIDEA

## Rhyacophilidae

- Rhyacophila carolae* Harris. 8. Known only from type locality, a small first order stream in Bankhead National Forest. May. (2)
- R. carolina* Banks. 1, 5, 6, 8, 10, 11, 13, 14, 17-22, 25, 27-29, 31, 32, 34, 42, 51, 53, 66. Most common and widespread *Rhyacophila* in Alabama; most commonly collected in northern half of state. April-October. (353)
- R. fenestra* Ross. 1, 2. Only records from extreme northwestern Alabama on Highland Rim. June. (6)
- R. fuscula* (Walker). 14, 17, 18, 25, 27-29, 31, 32. Occurring in northern half of Alabama, primarily in Piedmont. April-June, September, October. (81)
- R. glaberrima* Ulmer. 8, 11, 13, 18, 25. Infrequently collected at scattered north Alabama localities. May, June, September, October. (25)
- R. ledra* Ross. 1-3, 6, 14, 17, 20, 21, 25, 39, 51, 52, 58, 66, 67. Widespread, but infrequently collected in state. May, June. (46)
- R. lobifera* Betten. 14, 21, 25. Common in a few small streams of the Cumberland Plateau in central Alabama. April, May. (86)
- R. nigrita* Banks. 17, 18, 25, 29. Uncommon; mainly in small Piedmont streams. May, June. (13)
- R. teddyi* Ross. 17. Only records from small streams in lower Appalachians. May. (2)
- R. torva* Hagen. 17, 18, 31. Infrequently collected in small Piedmont and lower Appalachian streams. May, June. (15)
- R. vulphipes* Milne. 34. Larval records from Little Cahaba River provided by D.A. Etnier. This record is tentative but the specimens key to *R. vulphipes* in Unzicker *et al.* (1982) and not to any of the recorded species from the Cahaba River system or from central Alabama. April. (2)

## PLENITENTORIA

## LIMNNEPHILOIDEA

## Goeridae

- Goera calcarata* Banks. 1, 5, 6, 16-19, 27, 28, 34. Common in northern Alabama, particularly in small streams of lower Appalachians. April-October. (273)
- G. townesi* Morse. 8, 12, 17, 18, 25, 27, 29, 32. Similar in occurrence to *G. calcarata*, but more frequently collected in Piedmont and Cumberland Plateau streams. May, June. (233)

## Limnephilidae

- Hydatophylax argus* (Harris). 25. Larval records from several small streams of the Cumberland Plateau. April, May. (37)
- Ironoquia kaskaskia* (Ross). 22. Only record from a large, sand-bottom river. October. (1)
- I. punctatissima* (Walker). 18, 20, 25, 34, 35, 43, 45. Most often collected along large rivers, but generally uncommon in our collections. September, October. (34)
- Platycentropus radiatus* (Say). 8, 12. Rare in small streams of Cumberland Plateau. May. (3)
- Pycnopsyche gentilis* (MacLachlan). 18, 27. Rarely collected in small streams of lower Appalachians. March (larva), October (adult). (2)

- P. indiana* (Ross). 18, 20, 22, 25, 34, 67. Uncommon in small streams, mainly in west central Alabama. October, November. (30)
- P. lepida* (Hagen). 18, 22, 25. Uncommon in several small streams of northern Alabama. September, October. (13)
- P. luculenta* (Betten). 18, 25, 34. Locally common in small streams of northern Alabama. October. (65)
- P. scabripennis* (Rambur). 1, 16, 18, 25, 34, 45. Uncommon at scattered localities in northern half of Alabama. June, September, October. (27)
- P. virginica* (Banks). 18. Single record from Coldwater Spring provided by K.L. Manuel. November. (1)

#### Uenoidae

- Neophylax acutus* Vineyard and Wiggins. 4. Records from small streams in southern Appalachians (Vineyard and Wiggins, 1987). October. (10)
- N. atlanta* Ross. 8. Record from small stream on Cumberland Plateau. November. (1)
- N. concinnus* McLachlan. 8, 25. Larvae collected from several small streams of Cumberland Plateau. March, May. (5)
- N. oligius* Ross. 25. Collected along several small streams of Cumberland Plateau. November. (5)
- N. ornatus* Banks. 8, 25. Rare along several small streams of Cumberland Plateau. April. (2)
- N. securis* Vineyard and Wiggins. 4. Record from small stream in southern Appalachians (Vineyard and Wiggins, 1987). October. (1)

#### Brachycentridae

- Brachycentrus chelatus* Ross. 67. Endemic to the Coastal Plain, collected by sweeping. March. (6)
- B. numerosus* (Say). 25, 34, 39, 54. Collected in a few streams in western Alabama, mainly as larvae. March, May. (14)
- Micrasema charonis* Banks. 17. Record from a small stream in lower Appalachians provided by D.A. Etnier. (23)
- M. n. sp.* 51, 53, 65-67. Endemic to the Coastal Plain and common in small streams; being described by J. Chapin and J. Morse. March-August. (226)
- M. rusticum* (Hagen). 12, 17, 25, 26, 31, 34, 39, 45, 51, 54, 66, 67. Common and widespread throughout Alabama. March-May. (697)
- M. wataga* Ross. 1, 3, 5, 6, 8, 10-12, 14, 17-21, 25-27, 29, 31, 32, 34, 43, 45, 51, 52, 64. Commonly collected throughout state, but most abundant in northern portion. April-October. (1007)

#### Lepidostomatidae

- Lepidostoma latipenne* (Banks). 10-12, 17-19, 25, 31, 34, 45. Occurring at scattered localities in northern half of state; never collected in large numbers. May, June, September, October. (77)
- L. tibiale* (Carpenter). 21, 28, 32. Uncommon; primarily collected in small Piedmont streams. May, June. (23)
- L. togatum* (Hagen). 17, 18, 23, 28, 29, 31, 32, 54. Locally common, especially in small Piedmont streams. May, June, September, October. (147)
- L. weaveri* Harris. 25. Only known from type locality, a small temporary stream of the Cumberland Plateau. March. (39)

- Theliopsyche melas* Edwards. 5. Only record from a small temporary stream of the lower Appalachians. June. (1)  
*T. tallapoosa* Harris. 31. Known only from a small Piedmont stream. May. (3)

## PHRYGANEOIDEA

### Phryganeidae

- Agrypnia improba* (Hagen). 45. Records from vicinity of Auburn University. October. (28)  
*A. vestita* (Walker). 22, 25, 34. Rare in our collections. October. (3)  
*Banksiola concatenata* (Walker). 39, 45, 53. Only taken on Coastal Plain, but rare in our collections. April, May. (3)  
*Ptilostomis ocellifera* (Walker). 22, 23, 25, 26, 33, 36, 42, 66, 67. Primarily collected on Coastal Plain, particularly the northern portion. April-July. (32)  
*P. postica* (Walker). 17, 18, 24, 27, 29, 35, 39, 43, 45, 51, 66. Widespread in state, but rare in our collections. April-June, September. (16)

## BREVITENTORIA

### LEPTOCEROIDEA

#### Odontoceridae

- Psilotreta frontalis* Banks. 11, 17, 18, 25, 27, 53. Uncommon from scattered, primarily northern portions of the state. April, May, October. (29)  
*P. labida* Ross. 1, 19, 53. Rarely collected from scattered localities in Alabama. May, June. (26)  
*P. rufa* (Hagen). 17. Only record provided by D.A. Etnier from a tributary to Shoal Creek in northeastern Alabama. April. (1)

#### Calamoceratidae

- Anisocentropus pyraloides* (Walker). 1, 8, 11, 12, 14, 17, 18, 25, 28, 29, 31, 32, 36, 39, 42, 45, 51-53, 58, 64-67. Widely distributed in state, but most abundant in small Coastal Plain streams. April-August. (561)  
*Heteroplectron americanum* (Walker). 8, 17, 18, 25, 28, 29, 51. Primarily occurring at scattered localities in northern Alabama, but never collected in large numbers. April-June. (15)

#### Leptoceridae

- Ceraclea alabamiae* Harris. 5. Only known in Alabama from the Little River. June. (248)  
*C. alces* (Ross). 5. A north-central North American species, locally abundant in the Little River. June. (158)  
*C. ancylus* (Vorhies). 3, 11, 12, 14, 17, 25, 28, 29, 31, 34, 45. Widespread, but uncommon in northern half of state. May, June. (295)  
*C. cancellata* (Betten). 1-6, 8-10, 13, 14, 16-18, 20, 24-26, 28, 29, 31, 32, 35, 39, 41, 43, 45, 49, 51-54, 63-67. Widespread and common in state. May-September. (2651)  
*C. dihua* (Hagen). 5, 66, 67. Locally common, both on the Coastal Plain and in the lower Appalachians. March-May. (152)

- C. flava* (Banks). 1-4, 9-11, 13, 16-18, 20, 22, 24-26, 29, 32, 34, 35, 37-39, 41, 45, 49, 51, 53, 60, 63-67. Widespread and common in state. May, June. (2025)
- C. maculata* (Banks). 1-6, 8-18, 20-26, 28, 29, 31-37, 39-43, 45, 49-55, 58, 60, 63-67. Abundant in our collections from throughout the state. April-October. (8396)
- C. mentica* (Walker). 24. Record from the Tombigbee River provided by D.A. Etnier. July. (11)
- C. neffi* (Resh). 4, 5, 54. Rarely collected in lower Appalachians and from a single location on the Coastal Plain. May, June. (5)
- C. nepha* (Ross). 1-3, 5, 6, 8, 9-14, 16-18, 20-22, 24, 25, 29, 31-34, 39, 45, 51, 58, 66, 67. Widespread in state, but most frequently collected above fall line. April-June. (438)
- C. ophioderus* (Ross). 25, 26, 33-35, 41, 45, 49, 51, 53, 54, 60, 63-67. Primarily Coastal Plain in distribution. May-September. (1192)
- C. protonepha* Morse and Ross. 1-3, 5, 6, 8-14, 17, 18, 20-23, 25, 26, 29, 31, 32, 34, 39, 45, 51, 53, 54, 58, 64, 66, 67. Widespread, but most frequently collected in northern half of state. March-June. (13±0)
- C. resurgens* (Walker). 34, 35, 66, 67. Collected only from a few localities on the Coastal Plain. March, April. (18)
- C. tarsipunctata* (Vorhies). 1-6, 8-10, 12-14, 16-21, 24-26, 29, 31, 32, 34, 35, 37, 39-45, 49-54, 58, 63-67. Widespread and common in Alabama. April-June. (4075)
- C. transversa* (Hagen). 1-3, 5, 6, 12-18, 25, 28, 29, 31, 32, 34, 43, 45, 51, 64, 66. Occurring throughout Alabama, but most abundant in northern counties. April-July. (283)
- Leptocerus americanus* (Banks). 1, 8, 11-13, 17, 21, 24, 33, 38, 39, 41, 43, 51, 53. Infrequently collected in small streams of Cumberland Plateau and western Coastal Plain. April-June. (84)
- Mystacidis sepulchralis* (Walker). 1, 2, 4-6, 8-11, 14-18, 20, 22, 25, 26, 28, 29, 31, 34, 45. Restricted to northern half of Alabama, primarily in small streams. May-October. (233)
- Nectopsyche candida* (Hagen). 1, 8-12, 16-18, 20-25, 29, 31, 33, 35, 36, 39-42, 45, 49, 51-55, 58, 64-67. Common throughout state except lower Appalachians. May-August. (943)
- N. exquisita* (Walker). 1, 3, 4, 9-14, 16, 17, 20-22, 25, 26, 28, 29, 31, 32, 34-36, 39-41, 45, 49, 50, 52, 54, 60, 63-67. Widespread and common in state. May-September. (743)
- N. paludicola* Harris. 66, 67. Endemic to small streams of the Coastal Plain. May-August. (82)
- N. pavidata* (Hagen). 1-6, 9-26, 31-37, 39, 40, 42, 43, 45, 51-55, 58, 60, 63-67. Most common and widespread *Nectopsyche* in state. May-October. (1275)
- N. spiloma* (Ross). 34, 35, 66, 67. Restricted to large Coastal plain rivers. May-October. (844)
- Oecetis avara* (Banks). 1, 10-12, 20, 23-26, 28, 32-36, 39-42, 45, 49, 50, 53-55, 65. Most frequently collected on Coastal Plain, particularly western portion. May-September. (2893)
- O. cinerascens* (Hagen). 1, 2, 4, 6, 11, 14-16, 18, 20, 22, 24-26, 32, 34-39, 43, 45, 50-53, 58, 60, 64, 66, 67. Widespread in state, but never collected in large numbers. April-October. (241)
- O. daytona* Ross. 52, 65-67. Rare; in small Coastal Plain streams. April, May, August. (12)
- O. ditissa* Ross. 1, 2, 5, 6, 8-12, 14-26, 29, 31, 33-41, 43, 45, 51-55, 58, 60, 63-67. Widespread and common in state. April-October. (877)
- O. georgia* Ross. 12, 17, 22, 23, 25, 36, 42, 51-53, 65-67. Primarily occurring in Coastal Plain streams. May-August. (171)
- O. inconspicua* (Walker). 1-6, 8-26, 28, 29, 31-43, 45, 49-55, 58, 60, 63-67. One of the most commonly collected caddisflies in the state. April-October. (6487)
- O. morsei* Bueno-Soria. 34, 35. Only collected from the Cahaba River. June-October. (14)
- O. nocturna* Ross. 1-6, 9-26, 28, 29, 31-36, 38-43, 45, 49-53, 55, 63-67. Widespread and common in Alabama. April-October. (2658)
- O. osteni* Milne. 11, 17, 20, 23-25, 33, 34, 36, 40, 45, 51, 54, 60, 64-67. Primarily Coastal Plain in occurrence. March-October. (451)

- O. persimilis* (Banks). 1-3, 5, 6, 8-26, 29, 31-34, 36, 37, 39-41, 45, 49-55, 58, 60, 63-67. Widespread and common in state. April-October. (2144)
- O. scala* Milne. 5, 18, 34. Collected from several streams of the lower Appalachians and in the Cahaba River system. June-October. (401)
- O. sphyra* Ross. 10-12, 16-18, 22-26, 31-37, 39, 41, 42, 45, 51-55, 58, 60, 63-67. Most frequently collected on Coastal Plain, particularly along sand-bottomed rivers. May-September. (7697)
- Setodes dixiensis* Holzenthal. 34, 35. Restricted to the Cahaba River system. May, June, September, October. (496)
- S. guttatus* (Banks). 34, 54. Only collected at two localities, locally common. May, August, September. (48)
- S. incertus* (Walker). 32. Restricted to several small Piedmont streams. May. (5)
- S. stehri* (Ross). 54. Only records from the Sepulga River, where *S. guttatus* also occurs. May, September. (62)
- Triaenodes aba* Milne. 20, 39. Rarely collected in Alabama. May, June. (2)
- T. cumberlandensis* Etnier and Way. 5, 8, 17, 21, 22, 25. Collected from scattered localities on Cumberland Plateau and lower Appalachians. May, June, August. (63)
- T. dipsia* Ross. 25. Only record from a small headwater stream of the Cumberland Plateau. July. (1)
- T. flavescens* Banks. 1, 17. Rarely collected, in northern Alabama. June. (8)
- T. florida* Ross. 64. Collected from Lake Jackson. June. (12)
- T. helo* Milne. 60, 66, 67. Rare in collections; restricted to Coastal Plain. April-June, August, September. (11)
- T. ignita* (Walker). 1-6, 8-12, 14, 16-18, 20, 22-26, 29, 31, 33-37, 39, 42, 45, 49, 51-55, 58, 60, 63-67. Widespread and common in Alabama. April-October. (814)
- T. injusta* (Hagen). 1-4, 8, 9, 14, 17, 18, 20-22, 25, 26, 34, 64. Primarily occurring in northern portion of state. April-September. (199)
- T. marginata* Sibley. 1, 14, 17, 18, 20, 22, 25, 29, 31, 45, 51. As with *T. injusta*, most frequently collected in northern half of Alabama. April-August. (59)
- T. melaca* Ross. 39. Collected among small streams with sand-gravel substrates. April, May. (4)
- T. n. sp.* 42, 52, 65, 66. Restricted to small Coastal Plain streams; being described by K.L. Manuel. May, June, August. (29)
- T. nox* Ross. 29, 34, 45. Collected in Piedmont region and from a tributary to the Cahaba River. May (4)
- T. ochracea* Betten and Mosely. 1, 4, 6, 8, 17, 22, 23, 25, 29, 51, 52, 66, 67. Collected infrequently throughout the state. April-June. (64)
- T. perna* Ross. 5, 9, 16, 18, 20, 22, 25, 26, 34, 52, 66, 67. Distribution and abundance similar to *T. ochracea*. May-September. (58)
- T. smithi* Ross. 8, 25, 35, 52, 53, 64. Uncommon in collections, primarily from western portion of Alabama. May, June, August. (16)
- T. taenia* Ross. 17, 18, 39, 45. Most specimens taken in small Piedmont streams. May, June. (5)
- T. tarda* Milne. 6, 14, 18, 20, 24, 25, 32, 38, 41, 49, 50, 51. Collected at scattered localities throughout the state. May, June. (68)
- T. tridonta* Ross. 51. Collected from several small Coastal Plain streams with substrates of sand-gravel. April. (17)

## Molannidae

- Molanna blenda* Sibley. 17, 18, 20, 25, 26, 29, 45, 51, 53, 66. Widespread, but infrequently collected in state. April-June. (27)

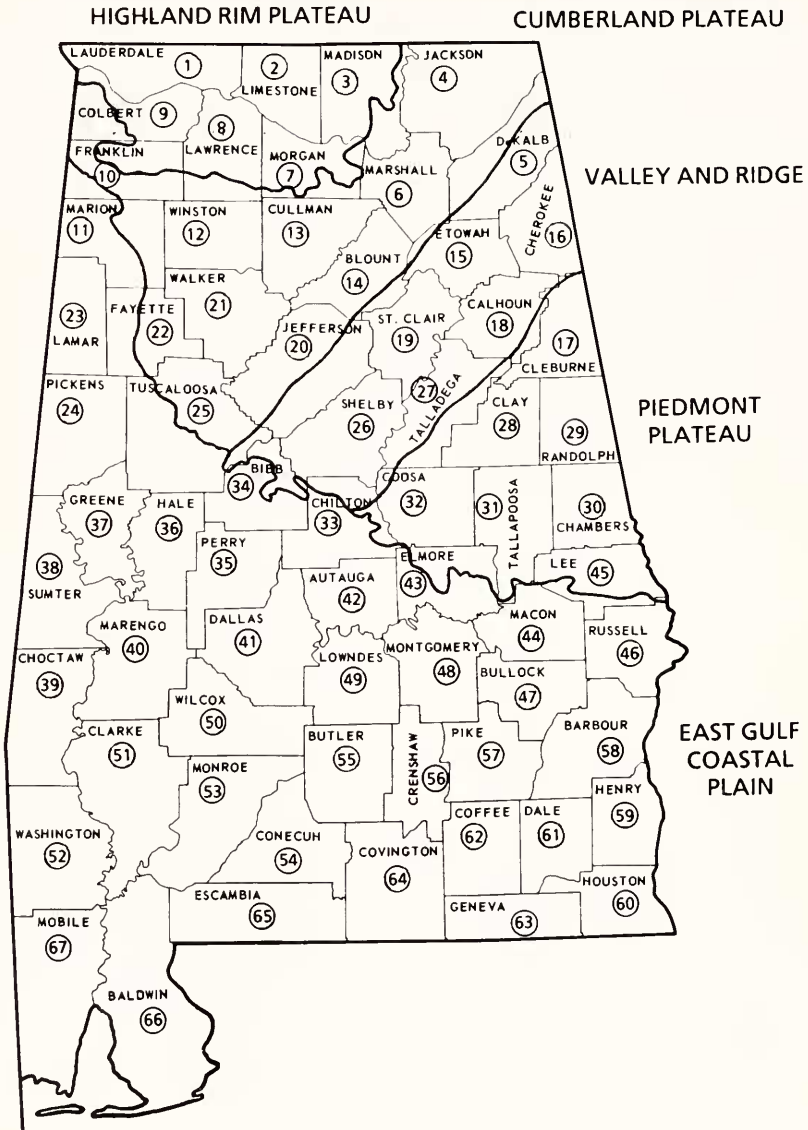


Figure 1. Counties and physiographic provinces of Alabama.



- M. tryphena* Betten. 1, 8, 12, 14, 17, 18, 25, 28, 36, 45, 51, 53, 64-67. Widespread in state, but never collected in large numbers. April-September. (56)
- M. ulmerina* Navas. 12-14, 17, 18, 20, 21, 24, 25, 28, 31, 39, 52-55, 58, 64, 66, 67. Most widely occurring and frequently collected *Molanna* in the state. April-September. (108)

## SERICOSTOMATOIDEA

### Helicopsychidae

- Helicopsyche borealis* (Hagen). 1, 8, 10, 12, 14, 17, 19, 20, 25, 27, 28, 32, 34, 39, 50, 51, 53, 54. Widespread and common in state, particularly above the fall line. April-October. (871)

### Sericostomatidae

- Agarodes alabamensis* Harris. 51. Only known from the type locality, a small Coastal Plain stream. April. (2)
- A. crassicornis* (Walker). 12, 21, 22, 45, 52, 53, 58, 63, 65-67. Most common in small sand-bottom streams of the lower Coastal Plain. April-June. (211)
- A. griseus* Banks. 8, 10, 17, 31, 32, 45. Collected above the fall-line, most frequently in the Piedmont region. April-June. (73)
- A. libalis* Ross and Scott. 22, 24, 36, 65-67. Commonly collected in small Coastal Plain streams. April-August. (307)
- A. stannardi* (Ross). 10-12. Uncommonly collected in several small streams of northwestern Alabama. May, June. (10)

## SUMMARY

This checklist, combined with those previously published (Harris, 1986a, 1988; Lago and Harris, 1987), brings the total number of caddisflies in Alabama to 323 species. This total is comparable to the 298 species reported from Tennessee (Etnier and Schuster, 1979) and the 330 species from North and South Carolina (Unzicker *et al.*, 1982). This species total is probably a reflection of the range of physiographic regions represented in the state (fig. 1) as well as the result of intensive collecting. Collections from neighboring Mississippi, for example, which lies almost entirely within the East Gulf Coastal Plain yielded only 139 caddisfly species (Holzenthal *et al.*, 1982).

The 323 species of caddisflies were distributed among 57 genera and 17 families. Hydrptilidae were best represented (97 species), followed by Leptoceridae (56 species), Hydropsychidae (47 species), and Polycentropodidae (32 species). These four families which accounted for 72% of the total fauna in Alabama are noted for their ability to exploit warm water habitats typical of Alabama (Wiggins, 1977).

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